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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,025	07/17/2003	Luc deBoer	122462.00002.005	1677

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EXAMINER

COLLINS, GIOVANNA M

ART UNIT PAPER NUMBER

3672

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,025

Applicant(s)

DEBOER, LUC

Examiner

Giovanna M. Collins

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20031002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed October 2, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. There is no copy of the document entitled IADC/SPE 1996 Drilling conference Abstract Reporting Form. Therefore this document has not been considered.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferguson '969.

Ferguson (figs. 1 and 3) discloses a system for controlling density of drilling fluid in a wellbore comprising a drill string (21) having a top end and a bottom end the top end being located at the surface the bottom end being located in the well bore the drill string for delivering a drilling fluid (at 24) having a predetermined density from the surface to the wellbore; a drill bit (31) connected to the bottom end of the drill string and a wellhead injection apparatus (At 16) for delivering a base fluid have a predetermine density from the surface into the wellbore to create a combination fluid the base fluid having a density greater than the density of the drilling fluid (col. 3, lines 51-53) said combination fluid having a predetermined density that is defined by a selected ratio of the drilling fluid and the base fluid the combination fluid rising to the surface.

Referring to claim 8, Ferguson discloses the density of the drilling fluid is adapted to facilitate near balanced drilling operations (col. 43, lines 44-49).

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Reichman '327.

Reichman discloses (figs. 1 and 2) discloses a system for controlling density of drilling fluid in a wellbore comprising a drill string (60) having a top end and a bottom end the top end being located at the surface the bottom end being located in the well bore the drill string for delivering a drilling fluid (see fig. 2, at 60) having a predetermined density from the surface to the wellbore; a drill bit (32) connected to the bottom end of the drill string and a wellhead injection apparatus (at 24) for delivering a base fluid have a predetermine density from the surface into the wellbore to create a combination fluid the bas fluid having a density greater than the density of the drilling fluid (col. 6, lines 18-20) said combination fluid having a predetermined density that is defined by a selected ratio of the drilling fluid and the base fluid the combination fluid rising to the surface.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reichman '327 in view of Maurer et al. '437.

Art Unit: 3672

Reichman discloses the system of claim 1 but does not disclose a drilling rig. Watkins teaches is well known in the art to use a drilling rig is used when drilling in subsea areas (col. 1, lines 26-30). As one of ordinary skill in the art would be familiar with using drilling rig when drilling in subsea areas it would be obvious to one of ordinary skill in the art to modify the system disclosed by Reichman to include a drilling rig.

Referring to claim 3, Watkins teaches (Fig. 1) charging line (43) located at the surface and lower end connected to a injection apparatus (at 15) for establishing communication between the surface and the wellhead.

Referring to claim 4, Watkins teaches a riser (13) for delivering fluid from a wellbore to a surface.

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reichman '327 in view of Maurer et al. '437 as applied to claim 4 above, and further in view of Peterman et al. '824.

Reichman, as modified, discloses the system of claim 4 but does not disclose a rotating head device and a return line. Peterman teaches (see Fig. 16) a rotating head device (654) and a return line (at 694). The rotating diverter and return are used to control the hydrostatic pressure in a riser. As it would be advantageous to have control of the hydrostatic pressure in the riser, it would be obvious to further modify the system disclosed by Reichman to have a rotating diverter and return line as taught by Peterman.

Referring to claim 6, Reichman teaches a separation unit (34).

6. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reichman '327 in view of Hooper '691.

Reichman does not disclose the density of the drilling fluid is adapted to facilitate underbalanced drilling operations. Hooper teaches that in underbalanced drilling the rate of penetration is increased (col. 1, lines 38-40) and near balanced drilling prevents blowouts and kicks (col. 1, line 34-35). As it would be advantageous to increase the rate of penetration at the bit, it would be obvious to modify the apparatus disclosed by Reichman to have the drilling fluid adapted to facilitate underbalanced drilling as suggested by Hooper.

Referring to claim 8, Reichman does not disclose the density of the drilling fluid is adapted to facilitate near balanced drilling operations. Hooper teaches near balanced drilling prevents blowouts and kicks (col. 1, line 34-35). As it would be advantageous prevent blowouts or kicks, it would be obvious to modify the apparatus disclosed by Reichman to have the drilling fluid adapted to facilitate near balanced drilling as suggested by Hooper.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 703-306-5707. The examiner can normally be reached on 6:30-3 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gmc


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